

MINISTRY OF WORKS

*Trees
in Kensington Gardens*

FOURTH REPORT OF THE ADVISORY
COMMITTEE ON FORESTRY



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MINISTRY OF WORKS

Advisory Committee on Forestry

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FOURTH REPORT

To the Right Honourable HUGH MOLSON, M.P.

SIR,

1. In accordance with your instructions we have carefully considered the problems of long-term arboricultural management in the Royal Parks in Inner London.¹ We have found it inadvisable to attempt to lay down detailed prescriptions for future decades and have therefore limited our considerations to principles calculated to maintain the arboreal effects which have become traditional in the Royal Parks. As a first step we have devoted our attention to Kensington Gardens and beg to submit our Report.

HISTORICAL NOTE ON KENSINGTON GARDENS

2. In 1689 when William III purchased Nottingham House (which was rebuilt within the next decade as Kensington Palace), the Gardens did not exceed 26 acres. Queen Anne added another 30 acres, and Queen Caroline, wife of George II, extended the Gardens by more than 200 acres, taking in a part of Hyde Park and forming the Serpentine from the ponds of the sluggish Westbourne. In 1871 a further small area was added from Hyde Park as a setting for the Albert Memorial.

3. Henry Wise's plan of the area (circa 1700) shows a number of separate rectangular plantations of trees, the two largest of which were to the East of the site of the Round Pond, and the others approximately on the line of the Flower Walk. The plan also shows several long single lines of trees, and later plans show a gradual increase in formal planting, until by the mid-nineteenth century there were ten avenues, including the Broad Walk. Several of these crossed at the point now occupied by the Physical Energy statue, and are still clearly recognisable; the spaces between them were so thickly planted that they appeared as a series of dense wedges of forest.

4. The Broad Walk is thought to represent the old boundary of the Palace grounds. It seems to have originated as a single row avenue during Queen Anne's reign and an engraving of the time shows the trees as immature and guarded. The two further rows were planted later, possibly by Queen Caroline, and appear on a plan of about 1727. By far the greatest part of the planting in Kensington Gardens was carried out under the direction of Queen Anne and Queen Caroline.

5. In 1703 a report signed by Vanbrugh and Wren on the "bills of Henry Wise for new works in Her Majesty's Gardens at Kensington" stated that the ground formerly planted with orchard trees had now been "raised, levelled and new fitted with borders, turf and gravel, plants, evergreens and flowers"; at the same time the gardens north of the Greenhouse (on the site of the old Gravel

¹We consider the general principles set forth in this Report to be applicable to the following Parks: Green Park, Greenwich Park, Hyde Park, Kensington Gardens, Regent's Park and Primrose Hill and St. James's Park.

Pits) extending to Uxbridge Road were planted with a variety of trees and shrubs, including Yews, Holly, Laurels, Cherries, Apricots and Peaches.

6. In 1727/8 a great deal of work was done: the present boundary with Hyde Park was established, the Round Pond excavated, and the Gardens were laid out by Bridgeman much as they are today. Most of this work was initiated by George I but it was completed after his death by Queen Caroline who abolished the stiff "box tree grenadiers and dragons (sic) of yew". The fantastic flower borders laid out by Queen Anne were swept away, and were replaced by smooth, verdant lawns, plantations, promenades and vistas. Among the trees planted at this time were Elms, Planes, Oaks, Chestnuts, Walnuts, Ashes, Beeches, Limes, Almonds, Firs, Holly, Briars and Thorns. The planting of a "colonnade" of Elm and Spanish chestnut along Buck Hill Walk, of which a few trees survive, is credited to Queen Caroline but may have been done under the instructions of George I.

7. The plan of about 1727 shows the Broad Walk (then called "Grand Walk"), Dial Walk, Palace Avenue and all the other main avenues almost exactly as they are today. The Broad Walk remained unchanged from that date until it was felled and replanted in 1953/5. The plan also shows the Round Pond, almost surrounded at some little distance by a semicircular double avenue of trees, both ends of which touch the Broad Walk. The semicircle is filled in on the Broad Walk side by solid ranks of trees. The plan is amongst the King's Drawings in the British Museum.

8. The fine vistas formed during this period of great activity drew objections from contemporary critics on the grounds of their "disagreeable formality", but this view is rejected by Weir, in Knight's "London" (1841), who holds that the formality is apparent only in the ground plan.

9. By the middle of the nineteenth century the cutting down of trees had already become a popular subject for cries of "vandalism". The felling of some small trees on the site of the Exhibition in 1851 resulted in indignant letters to the press and caustic comments by Punch.

10. In 1870 the Superintendent of the Central Royal Parks reported on the "deplorable" state of many of the trees in the Gardens which had been planted too close together in the early eighteenth century. A number had been blown down or otherwise removed from time to time, but no large-scale thinning had taken place; the trees were reported to consist mainly of elms, and would at this time have been almost 150 years old. No drastic action was taken on this report, although a few trees were removed.

11. In 1871 the area surrounding the Albert Memorial was incorporated into the Gardens and the southern half of Lancaster Walk was diverted from its original line to frame the new memorial. A number of trees still stand on the line of the original avenue.

12. In 1904 it was reported that there were a few firs left in expiring condition in the area just north of the Orangery. The Elms in the Gardens were counted in 1905, there being 1,400 in all, of which 897 were described as "old" and presumably dated from the 1727 planting. The trees in the Broad Walk were lopped for safety in 1905 after a number of accidents.

13. In 1908 the Frame Ground was removed to Hyde Park and the Orangery garden was laid out in formal Dutch style; in the winter of 1910/11 the path

north of the Orangery was widened and an avenue of Limes planted. In 1924 a line of Golden Elm and Maples was planted from Lancaster Gate to Queen's Road, Bayswater.

PRESENT CONDITIONS

14. The existing layout and stocking of Kensington Gardens are thus the outcome of successive plans and plantings carried out from time to time over the past two hundred and fifty years. The area is now adorned with an abundance of forest and other trees, not everywhere distributed to the best advantage; with the exception of the plantings of recent years, these are sufficiently even in age and expectation of life to make it desirable to consider now the methods by which a satisfactory future succession can be secured. The principal arboreal features are the trees bordering the Broad Walk, the three main vistas from Kensington Palace, the numerous avenues radiating from the statue of Physical Energy, and the trees grouped in the intervening parklands, where the maintenance of open lawns as well as trees is of importance. Other dominating features of the layout are the Palace and its environs, the Round Pond and Long Water.

15. This Royal Park, together with Hyde Park, is surrounded by the heavily built-up districts of West London, a circumstance which gives rise to a number of problems. The terrain slopes gently from north to south and also to Long Water on the east. The average height growth attained by the predominating species of trees is remarkable, indicating that soil conditions and drainage have in general been satisfactory. With the species now most in evidence it is clear that fogs and fumes have not proved a serious impediment to growth; it is, however, beyond doubt that atmospheric impurity imposes a limit to the kinds of trees it is wise to plant.

16. For various reasons the London Plane, Lime and Horse-chestnut have supplanted the common Elm as the predominant species. The Elm avenue, for so many years a feature of the Broad Walk, was replanted with Lime trees in 1955 on the recommendation of your Committee; inner rows of Norway Maple were added in 1958.

17. Although here and there it may be considered that trees are standing too close together for traditional park-like effect, growth is for the most part healthy and vigorous enough to augur well for future plantings of the same species. Disease, stag-headedness and malformations of bole and crown are rare. It may also be considered that the avenue theme is over-stressed in the present layout; the future of some of these avenues is one of the principal problems to be solved.

18. Many of the shrubberies, too, may be said to have become worn out; surviving species of shrubs have become dull in appearance, and in places overgrown, and renovation will soon be necessary where it has not already been carried out. In particular, attention is needed to shrubberies on the northern boundary, along the sides of Long Water and those forming the background to the Flower Walk.

GENERAL PRINCIPLES

19. Tree growth is in the main slow to develop and, as in all aspects of forestry practice, effects are obtainable only by foresight, patience and steadfast adherence to overall principles operating over a long period of years. Long-term objectives can be attained by means of sectional plans of shorter term, pre-

scribed and carried out in conformity with comprehensive principles of management: these principles are the maintenance of a balance of age classes in the interests of succession; regulation of densities and distribution; planting of the right kinds of trees in the right places; preservation of amenity and protection of the public (and of the trees) from harm. Fundamentally these principles are comparable to that of *sustained yield* in forestry, modified to provide the ornamental element proper to urban parks. Some fellings are periodically unavoidable but must always be regulated so far as possible to avoid unsightly blank spaces which are the cause of much criticism. Replantings should always follow with a minimum of delay, care being taken not to encroach either upon the area of open lawn needed for public enjoyment or to restrict the vistas on which the beauty of the landscape effect so much depends.

20. In applying these principles to Kensington Gardens, care must be taken to maintain the familiar underlying architectural structure of the Gardens, which are among the few areas of this kind to survive the impact of the fashions of the English School of landscape gardening in the 18th century. It is, however, necessary to recognise the essential changes, apart from social ones, that have taken place since they were laid out. The original avenues, based on French models, gave the appearance of being driven through dense forest; today much of the charm depends upon informal views through the stems of trees. Moreover, in the course of time the proportions of the avenues themselves, and even their direction, have changed and they no longer have the pure classical effect intended: the north-south terminal features are no longer the intended vistas of open country, but rows of houses. It is desirable, therefore, not to depart from the classical sense of geometry, but to fill in and adjust as is reasonable in present-day circumstances. Development on these lines has in fact been continually taking place, and is one of the charms of the Gardens.

21. Tall trees growing in public places can never be entirely free from an element of danger to public and property; this risk, in reasonable degree, must be accepted. Ageing, heavily crowned elms and beeches are liable to shed large branches from time to time as are poplars and horse-chestnuts when diseased; none of these species should be retained over long but it is to be noted that some of the older elms provide nesting places for several interesting kinds of birds which are likely to be lost to the central London area if their nesting places are destroyed. Such trees need to be kept under observation; risks can usually be reduced by timely lopping.

22. The principles of arboricultural control in this Royal Park can be summarised as follows:

- (1) To maintain dignity and amenity.
- (2) To establish by appropriate stages a properly distributed succession of age classes, to ensure continuity.
- (3) To plant only appropriate species.
- (4) To protect and tend the growing trees and shrubs, and to attend to pruning and lopping.
- (5) To minimise risks to the public from unsound trees.
- (6) To maintain a territorial balance between plantations and open spaces.

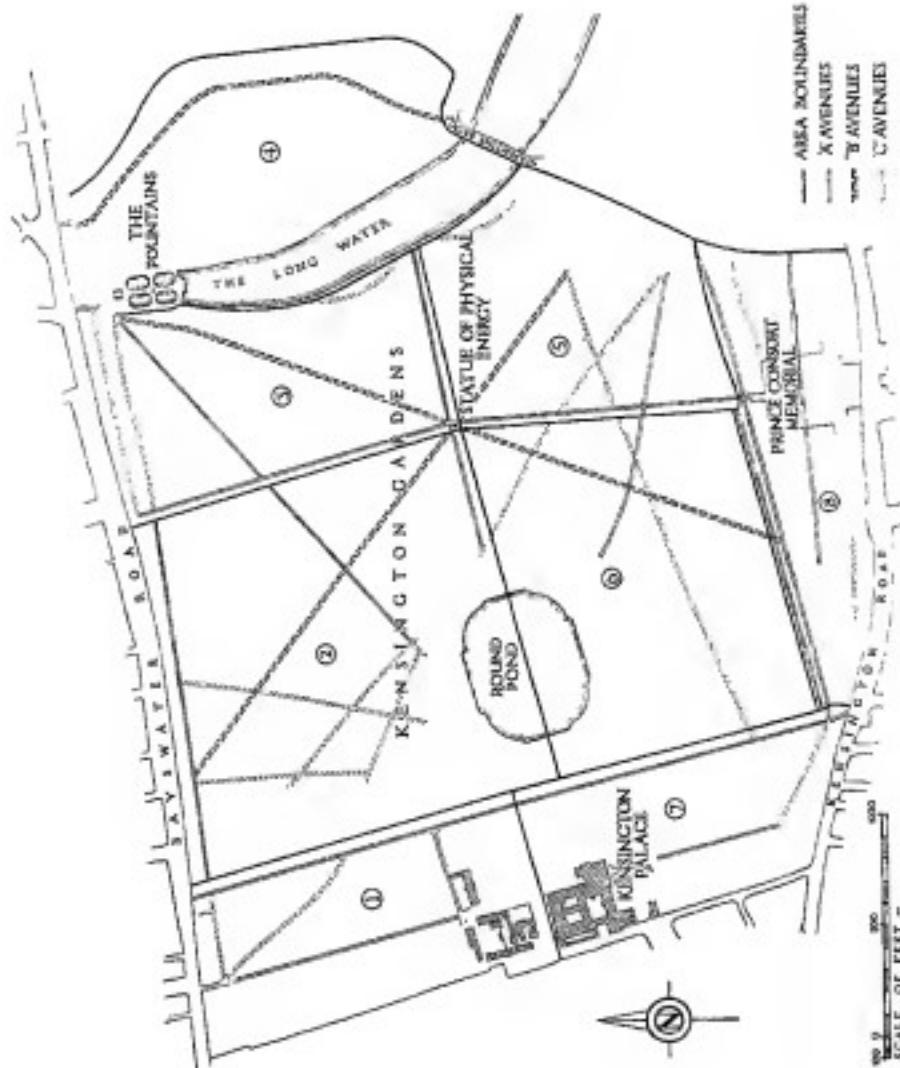


Plate 5. Plan to illustrate the Advisory Committee's proposals. (Parks, 23 and 26)

LAYOUT AND MANAGEMENT

23. For purposes of control it is recommended that the Gardens should be divided into areas, as numbered 1 to 8 on the plan on p. 7; each area should be surveyed every five years by your Committee, which would then advise on the programme for the ensuing five-year period. The areas should also be inspected at more frequent intervals as may be necessary.

24. The sequence of operations must be made to run smoothly. Not all the trees included in the existing stocking conform truly to park-like tradition either in regard to form or spacing. Normally park trees are pruned and trimmed to an even height above ground level by the browsing of cattle or deer. Here there is no such aid and these effects must be obtained by other means.

25. Trees standing on boundaries verging on public roads require special consideration. Those bordering Bayswater Road must be removed as they become dangerous and should be replaced by a complete row sited at least fifteen feet from the boundary fence. Adjacent to Kensington Road the old elms are already being felled on our advice; these clearances will give light and space for a new row of trees along this boundary, also to be set back at a distance of not less than fifteen feet, extending from the south-west corner of the area to Coalbrookdale Gate, the approach to the Albert Memorial being left open. Some recently planted horse-chestnuts were sited too close to the roadway but have now been set back to a safer distance. The common horse-chestnut is the species recommended.

26. The avenues require special consideration, and for the purposes of this Report have been divided into three categories, marked on the plan. Those in category A are the most formal in character, consisting of single or double rows of trees more or less widely spaced; with the exception of the Flower Walk, they belong to the original layout of the Gardens. Category B avenues are also part of the original layout, but are subsidiary in character; they are narrower and are flanked only by single lines of trees. The avenues in categories A and B represent the skeleton of the original layout, the flesh of which was provided by the dense wedges of forest which filled up the intervening spaces. Category C avenues are later features, driven through these wedges, and are informal and irregular in appearance.

27. Avenues designated A should be retained, as at present, the single or double rows of trees being maintained and renewed as spacing and growth may dictate. Where the trees stand too closely together it is usually possible to remove alternate trees without injury to the general effect but, if the health and appearance of an avenue are on the decline, the only real remedy is complete felling and replanting; an avenue can rarely, if ever, be patched satisfactorily by selective felling and interplanting. It is occasionally practicable to renew by planting parallel to existing rows of trees, the latter being removed in due course. Whatever method is adopted to perpetuate an avenue must always allow sufficient space and overhead light to enable the new trees to grow tall and shapely and in conformity one with another.

28. Avenues in category B should retain their character, but the strict formality of a regular avenue could be eased on a principle similar to that advocated by Humphrey Repton at the end of the eighteenth century, i.e. by converting the straight lines of trees to spaced groups:

(a) Existing avenue o o o o o o o o o o

o o o o o o o o o o

(b) Intermediate stage N N N N N N
N N N N N N N N N
o o o o o o

o o o o o o
N N N N N N N N N
N N N N N N

(c) Final layout N N N N N N
N N N N N N N N N
N N N N N N

N N N N N N
N N N N N N N N N
N N N N N N

o = Existing tree

n = New tree to be planted

This operation should present little difficulty, if carried out in stages. The avenue will thus be perpetuated in more open and less stereotyped outline.

29. Avenues designated C can, perhaps, most suitably be retained in their present informal state, or converted to the group method as advocated for those in the B class. They should not be re-established as avenues of single line plantings.

30. Work of renovation required on the shrubberies must proceed by easy stages. Existing growth can be grubbed up in short sections and at once replaced by suitable ornamental species chosen from the list of recommendations published in your Committee's Second Report. Succession of blossom, fruit and tints of foliage, together with adaptability to urban conditions are the chief considerations in regard to species. Foliage, flower and fruit, form and height-growth are points to consider, and again provision of space and light is important. Here and there it will be necessary to keep the sections treated free from an excess of overhead shade, but many of the smaller (ornamental) trees are appropriate as a background. The shrubberies most urgently needing improvement are those forming the background of the Flower Walk and also those on the verges of Long Water, bearing in mind the requirements of the Bird Sanctuary.

SPECIES

31. Trees planted to carry on the traditional amenities of Kensington Gardens must, in the main, be of the species that have proved themselves able to grow successfully in the conditions existing in parks and open spaces in central London. The satisfactory height-growth and form attained by Elm, Horse-Chestnut, Lime and some Poplars are important indications of suitability. Tall trees will continue to be desirable to retain background, screening and other localised effects. Other necessary considerations are those of tint and persistence of foliage and of stability and freedom from disease. Generally it may be assumed that trees native to Great Britain, or species long acclimatised in this country, will continue to dominate the scene, but the planting of some more recent introductions must not be overlooked where conditions allow. Nor ought hitherto untried species to be ruled out if *prima facie* desirable, and provided such plantings are at first made sparingly and regarded as experimental.

32. Landscape effects should be preserved as far as possible by careful siting of new trees and by grouping the traditional types of trees with others of ornamental merit. Flowering and fruiting habits are also important for their seasonal beauty—fruits and seeds being also necessary for the retention of bird life, the variety of which is one of the amenities of the park.

33. The individual characteristics of some of the park trees listed in your Committee's Second Report can usefully be recapitulated (Parts (a) and (b) of the list are reproduced in the Appendix). The English Elm, possibly the most gracious and imposing in form of growth of all the English park trees, is recognised as liable to become unstable in old age. Nevertheless there should be no hesitation still to plant this majestic tree for its scenic value in all landscape surroundings and its tolerance of urban conditions. Horse-Chestnut, some of the more free growing Poplars, Beech and, indeed, others of our traditional park trees share this fault of instability as they grow old and subject to disease. Such risks as there may be can effectively be controlled if ageing and heavily crowned trees are kept under observation and suitably treated at proper times by lopping and other means. It is to be noted that the Balsam Poplars, which otherwise are suitable for park planting, are mostly susceptible to a bacterial disease. Fortunately some resistant varieties are now being developed. Our native Oaks do not always succeed in attaining their true form in built-up surroundings. Of the two British species the Durmast or sessile-flowered Oak offers the better prospect. Oaks of exotic species, other than the time-tested Turkey Oak, have not often been planted in the central area of London, although some of them flourish and grow to fine proportions at Kew and elsewhere around the periphery; neither these nor the native Oaks should be excluded from the Royal Parks. Hornbeam and Spanish Chestnut are other trees that might be planted more freely; also the Lime, the red-twigg'd variety of which is especially valuable as an ornamental tree. The London Plane has proved beyond doubt its remarkable indifference to site and atmosphere. It is free from dangerous attributes and can assume noble proportions; if planted with a moderation not always observed in London in past years, this tree is a most useful medium for landscape effect. On the more open sites the Oriental Plane has, perhaps, a better claim as an ornamental species on account of its characteristic form and more finely cut foliage. Sycamore, of which several varieties are available, is another hardy and safe species that will develop into a shapely park tree in similar surroundings.

34. If the advantages and disadvantages of the many kinds of trees and shrubs available for the adornment of the parks in Central London are borne in mind in relation to sites and soils, there is a wide range of choice, provided always care is taken in the blending of form and of types and tints of foliage.

35. Trees raised or purchased for planting in the Royal Parks should be healthy, well grown specimens of good substance and form, grafted or budded stock being used only sparingly. Care of newly planted stock is as important as its choice: young trees must be adequately guarded to prevent damage, and timely pruning is essential to secure shapely growth.

SUMMARY AND RECOMMENDATIONS

36. Our recommendations can be summarised as follows:

- (1) Inspections and Reports should be made at regular intervals.
- (2) The general structure of the original layout of the Gardens should be maintained.
- (3) Existing tendencies to even-aged classifications of tree growth should be corrected by appropriate stages.
- (4) Fellings should be arranged as inconspicuously as circumstances permit and replantings follow without loss of time.
- (5) Ageing trees should be kept under close observation and lopped, topped or removed as may be indicated.
- (6) The species selected for planting should be those adapted to the sites and soils available and should blend in form and foliage with the general conformation of the landscape.
- (7) All newly planted stock should be tended, pruned and protected as may be necessary, to secure shapely growth.
- (8) Only approved, well-grown nursery stock should be utilized.
- (9) The general principles set forth in this Report can be regarded as applicable to all the Royal Parks in inner London.

Signed on behalf of the Committee

W. L. TAYLOR

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Appendix

TREES AND SHRUBS FOR THE ROYAL PARKS

- N = Native species
- t = Smoke tolerant (at Kew)
- f = Attractive flowers
- f = Succulent fruits attractive to birds
- A = Conspicuous autumn tints
- S = Scented

Approximate heights given in feet; species are included under more than one heading if appropriate.

(a) TREES FOR AVENUES AND GENERAL PLANTING

- Horse Chestnut (*Aesculus hippocastanum*) (fl) up to 100
- N Hornbeam (*Carpinus betulus*) (A) (t) 50-80
- Sweet Chestnut (*Castanea sativa*) (A) 70-100
- Plane Tree (*Platanus acerifolia*) (t) up to 100
- Turkey Oak (*Quercus cerris*) (t) 100
- N Common Oak (*Q. robur*) (t) 60-100
- N Durmast Oak (*Q. petraea*) (t) 60-80
- Red Oak (*Q. rubra*) 60-100
- N Mountain Ash (*Sorbus aucuparia*)
- N Lime Tree (*Tilia cordata*) (t) 80-90
- N " (*T. europea*) (t) 90-120
- N " (*T. platyphyllos*) (t) up to 100
- N Smooth Elm (*Ulmus carpiniifolia*) 80-90
- N Common Elm (*U. procera*) (t) 80-90
- N Cornish Elm (*U. stricta*) (t) 50-60

(b) SMALLER TREES AND SHRUBS ESPECIALLY SUITABLE FOR PLANTING IN LESS FORMAL DISPOSITION

- N *Acer campestre* (t) 20-35
- Amelanchier canadensis (t) (f) 20
" oblongifolia (t) (f) 6-8
- N *Berberis vulgaris* (f) 8-12
- N *Cornus sanguinea* (f) 6-12
Cotoneaster frigida (t) (f) 15-25
" simonsii (t) (f) 10-12
- Crataegus coccinea* (t) (f) 15-20
" cordata (t) (f) 20-30; fruits persistent till spring
" mollis (t) (f) 30-40
- N " monogyna (t) (f) up to 35
" orientalis (t) (f) 15-20
" prunifolia (t) (f) 15-20
" tomentosa (t) (f) 12-15
- N *Daphne mezereum* (t) (f) 5-7
- N *Euonymus europaeus* (t) (f) 15-20
Leycesteria formosa 6-8
- N *Ligustrum vulgare* (t) (f) 6-10
- N *Lonicera xylosteum* (f) 8-10
Malus floribunda (fl) 20-30
" prunifolia (f) up to 30
- N *Prunus padus* (fl) (f) 30-50
- N " spinosa (t) (f) 10-15
- N *Rhamnus cathartica* (f) 10-20
" frangula (f) 15-20
- N *Salix caprea* (t) 20-30
- N *Sambucus nigra* (t) (f) 15-20
" racemosa (f) 8-12
- N *Sorbus terminalis* (A) (f) 30-40
Viburnum carlesii (3-4) (S)
- N " opulus (t) (f) 10-15

Note: Exotic species have only been included if of a habit and character in keeping with the environment.



Plate I. One of the main avenues in Kensington Gardens.



Plate 2 Plan of Kensington Gardens and Hyde Park by Henry Wise (circa 1700)

Plate 3. Kensington Gardens (c.*1727*).

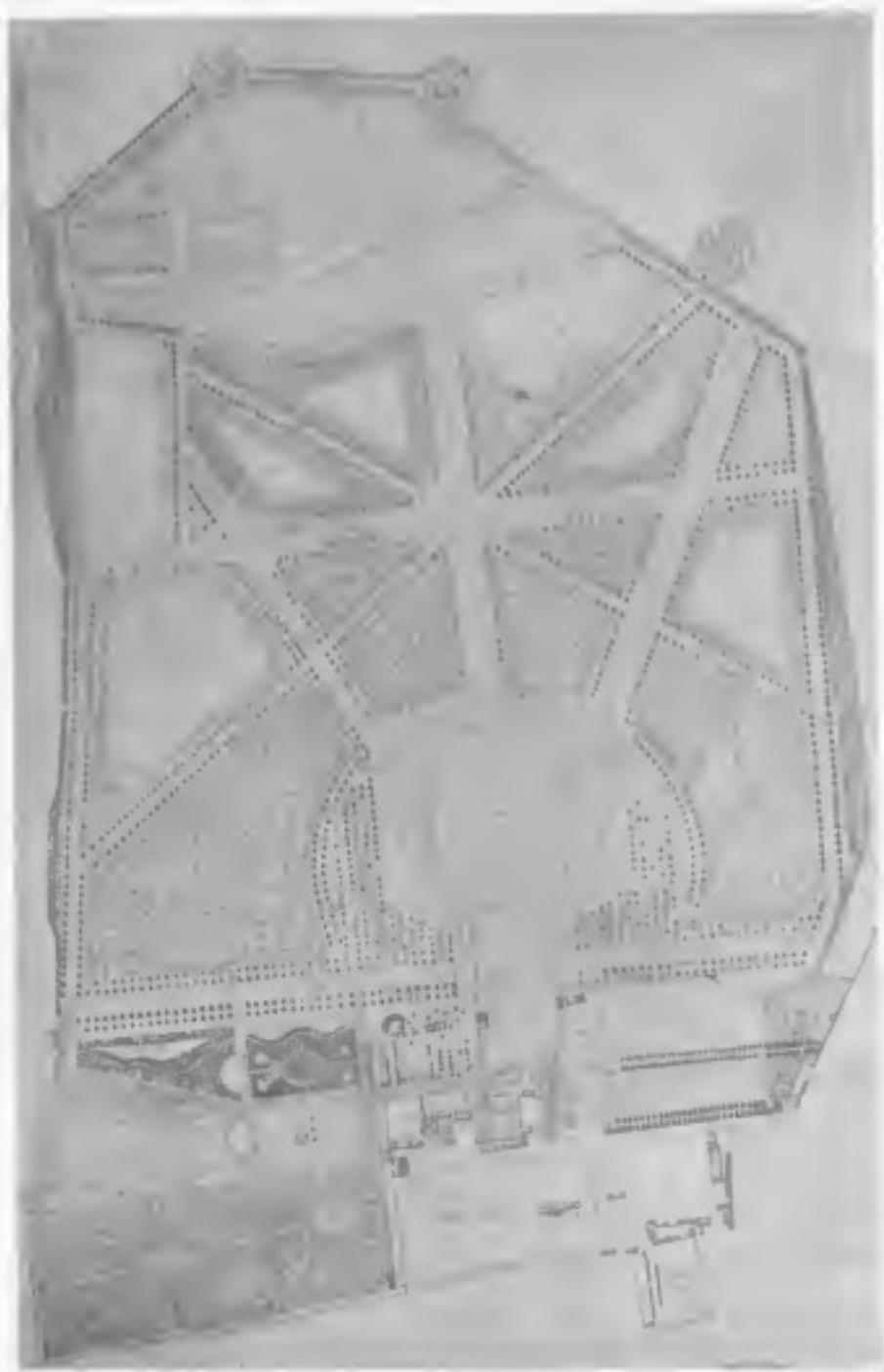




Plate 4. Aerial view of Kensington Gardens.